

Type I or II Categorical Exclusion Action Classification Form

TIP Project No.	BR-0026
WBS Element	67026.1.1
Federal Project No.	N/A

A. Project Description:

NCDOT Project BR-0026 proposes to replace Bridge No. 500050 on NC 210 over Middle Creek in Johnston County, North Carolina (Figures 1 and 2). The project will remove the existing bridge and replace it with a new bridge in its existing location. In addition, wide outside paved shoulders are proposed along both sides of the bridge (Figure 3).

The replacement structure will be approximately 160 feet long providing a 40-foot clear deck width. The bridge will include two 12-foot vehicular lanes and 8-foot shoulders on each side. The bridge length is based on preliminary design information and is set by hydraulic requirements. The roadway approaches will be raised approximately 3 feet on each side of the new bridge to accommodate the increased height of the girders to be used and match the new low chord.

Project construction will extend approximately 475 feet from the west end of the new bridge and approximately 285 feet from the east end of the new bridge. The approaches will be widened to provide two 12-foot vehicular lanes and 8-foot shoulders on both sides (with 4-foot paved shoulders). The roadway will be designed as a Minor Arterial using Regional Tier Guidelines with a 45 mile per hour design speed (Figure 3).

Traffic will be detoured off-site during the construction period (Figure 1).

B. Description of Need and Purpose:

The purpose of the proposed project is to replace a structurally deficient bridge. The existing structure was built in 1934 and reconstructed in 1961. It is 136 feet long, carries two lanes, has a clear roadway width of 28 feet and a deck width of 29.333 feet. NCDOT Structures Management Unit records indicate Bridge No. 500050 currently has a sufficiency rating of 9 out of a possible 100 for a new structure. The bridge is considered structurally deficient due to a superstructure condition appraisal of 4 out of 9 according to Federal Highway Administration standards. The bridge also meets the criteria for functionally obsolete due to a structural evaluation appraisal of 3 out of 9.

C. Categorical Exclusion Action Classification:

Type I(A) - Ground Disturbing Action

D. Proposed Improvements:

28. Bridge rehabilitation, reconstruction, or replacement or the construction of grade separation to replace existing at-grade railroad crossings, if the actions meet the constraints in 23 CFR 771.117(e)(1-6).

E. Special Project Information:**Estimated Traffic:**

Current Year (2020)	8,900 vehicles per day (vpd)
Future Year (2045)	14,000 vpd
Tractor-Trailer Semi-truck (TTST)	1%
Dual Axle Trucks (Dual)	3%

Alternatives Evaluation:

Off-site Detour (Recommended) – Bridge No. 500050 will be replaced along its existing alignment. Traffic will be detoured off-site (see Figure 1) during the construction period. NCDOT Guidelines for Evaluation of Offsite Detours for Bridge Replacement Projects considers multiple project variables beginning with the additional time traveled by the average road user resulting from the off-site detour. The off-site detour for this project would include NC 210, SR 1504 (Crantock Road), SR 1010 (Cleveland Road), and Swift Creek Road. The detour for the average road user would result in 14 minutes of additional travel time (10.3 miles additional travel). Up to an 8-month duration of construction is expected on this project. Due to the length of the detour route, NCDOT performed a cost evaluation on an on-site detour versus an off-site detour as well as construction feasibility and potential environmental impacts considerations. It was agreed upon and determined by NCDOT that an off-site detour was the acceptable option. Division 4 agrees with the use of an off-site detour and public comments received did not indicate substantial concerns from the surrounding community. Commitments to accommodate schools and EMS have been included in Section H to help minimize impacts to their services. The Johnston County TIMS Supervisor reported that 20 school buses travel across Bridge 50 for a total of 56 trips per day during the school year. She stated that an off-site detour would be impactful but that, if given noticed, rerouting the affected buses would be possible. Representatives from the Smithfield Fire Department and Johnston County Emergency Services reported that closure of Bridge 50 would have an overall moderate impact on their operations. Increased response times and delay of mutual aid to neighboring departments would be expected; however, while not ideal, it would not be overly inconvenient for their departments to maintain service by altering the response stations for varying areas during the construction period.

No Build – The no build alternative would result in eventually closing the road, which is unacceptable given the volume of traffic served by NC 210.

Rehabilitation – The bridge was constructed in 1934 and reconstructed in 1961. The current bridge is reaching the end of its useful life. Rehabilitation would only provide a temporary solution to the structural deficiency of the bridge.

On-site Detour – Due to the length of the off-site detour, an on-site detour was evaluated. A cost analysis and comparison was performed to help determine whether an on-site detour would be an acceptable option. Due to the additional cost and footprint associated with an on-site detour, the off-site detour option was selected as the preferred alternative. Division 4 agreed with this assessment and determination.

Pedestrian and Bicycle Accommodations: No sidewalks or dedicated bicycle facilities were observed within the project area. No specific recommendations for bicycle or

pedestrian accommodations were found in local plans; however, local plans do include broad goals for inclusion of bicycle and pedestrian accommodations where feasible. The *Town of Smithfield Comprehensive Growth Management Plan* identifies NC 210, Galilee Road, and Swift Creek Road as “major thoroughfares” and subsequently states, “Where feasible, major thoroughfares shall have wider outside lanes for safe travel of bicycles.”

The NCDOT Division of Bicycle and Pedestrian Transportation provided comments on this project (see Appendix), noting that the lack of development and absence of supporting plan documentation would seem to indicate that there is not a “significant” demand for bicycle or pedestrian accommodations. However, due to the presence of mobile home developments in the area which may generate bicycle and pedestrian traffic, the Division recommended inclusion of minimum 4-foot shoulders for the safety of potential bicyclists and pedestrians.

The new bridge will accommodate cyclists and pedestrians on paved shoulders. The design includes two 12-foot vehicular lanes with 8-foot paved shoulders on each side.

Natural Resources: Four potential jurisdictional streams (Middle Creek [perennial], Stream SA [perennial]/Stream SA [intermittent], Stream SB [perennial], and Stream SC [intermittent]), and two wetlands (WA and WC) may be impacted by the project based on preliminary design (slope stakes plus 25 feet) (Figure 2). Potential stream impacts total approximately 318 linear feet and potential wetlands impacts total approximately 0.09 acres. A Nationwide Permit (NWP) will likely be applicable for the project. The USACE holds the final discretion as to what permit may be required to authorize project construction. If a Section 404 permit is required, then a Section 401 Water Quality Certification (WQC) from the NCDWR will also be needed. Final impact determinations will be made during the permitting phase of the project.

Tribal Territory: Project notifications and requests for comment were sent to the Catawba Indian Nation and Tuscarora Indian Nation’s tribal historic preservation offices on November 4, 2019. No comments have been received to date.

Design Exceptions: There are no anticipated design exceptions.

Public Involvement: A landowner letter was sent to all property owners and residents affected directly by this project on October 15, 2018. Property owners were invited to comment. No comments were received from this public notification. A project information newsletter was subsequently sent to all property owners and residents in the project study area and along the proposed off-site detour route. A PublicInput.com web page was set up and from the newsletter citizens were invited to provide input. Additionally, a postage-paid postcard questionnaire was distributed door-to-door in four mobile home communities in the area of the bridge to be replaced and along the proposed off-site detour route. From these public outreach efforts, five comments were received. No comments received indicated pedestrian or bicycle travel across the subject bridge or expressed concerns about the detour length.

F. Project Impact Criteria Checklists:

F2. Ground Disturbing Actions – Type I (Appendix A) & Type II (Appendix B)			
PROJECT IMPACT THRESHOLDS (FHWA signature required if any of the questions 1-7 are marked “Yes”.)		Yes	No
1	Does the project require formal consultation with U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	Does the project result in impacts subject to the conditions of the Bald and Golden Eagle Protection Act (BGEPA)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	Does the project generate substantial controversy or public opposition, for any reason, following appropriate public involvement?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Does the project cause disproportionately high and adverse impacts relative to low-income and/or minority populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	Does the project involve a residential or commercial displacement, or a substantial amount of right of way acquisition?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	Does the project require an Individual Section 4(f) approval?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Does the project include adverse effects that cannot be resolved with a Memorandum of Agreement (MOA) under Section 106 of the National Historic Preservation Act (NHPA) or have an adverse effect on a National Historic Landmark (NHL)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If any question 8-31 is checked “Yes” then additional information will be required for those questions in Section G.			
Other Considerations		Yes	No
8	Is an Endangered Species Act (ESA) determination unresolved or is the project covered by a Programmatic Agreement under Section 7?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9	Is the project located in anadromous fish spawning waters?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10	Does the project impact waters classified as Outstanding Resource Water (ORW), High Quality Water (HQW), Water Supply Watershed Critical Areas, 303(d) listed impaired water bodies, buffer rules, or Submerged Aquatic Vegetation (SAV)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11	Does the project impact Waters of the United States in any of the designated mountain trout streams?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	Does the project require a U.S. Army Corps of Engineers (USACE) Individual Section 404 Permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	Will the project require an easement from a Federal Energy Regulatory Commission (FERC) licensed facility?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	Does the project include a Section 106 of the National Historic Preservation Act (NHPA) effects determination other than a No Effect, including archaeological remains?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15	Does the project involve GeoEnvironmental Sites of Concerns such as gas stations, dry cleaners, landfills, etc.?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16	Does the project require work encroaching and adversely affecting a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake, pursuant to Executive Order 11988 and 23 CFR 650 subpart A?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<u>Other Considerations for Type I and II Ground Disturbing Actions (continued)</u>		Yes	No
17	Is the project in a Coastal Area Management Act (CAMA) county and substantially affects the coastal zone and/or any Area of Environmental Concern (AEC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18	Does the project require a U.S. Coast Guard (USCG) permit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
19	Does the project involve construction activities in, across, or adjacent to a designated Wild and Scenic River present within the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20	Does the project involve Coastal Barrier Resources Act (CBRA) resources?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
21	Does the project impact federal lands (e.g. U.S. Forest Service (USFS), USFWS, etc.) or Tribal Lands?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22	Does the project involve any changes in access control or the modification or construction of an interchange on an interstate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23	Does the project have a permanent adverse effect on local traffic patterns or community cohesiveness?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
24	Will maintenance of traffic cause substantial disruption?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
25	Is the project inconsistent with the STIP, and where applicable, the Metropolitan Planning Organization's (MPO's) Transportation Improvement Program (TIP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
26	Does the project require the acquisition of lands under the protection of Section 6(f) of the Land and Water Conservation Act, the Federal Aid in Fish Restoration Act, the Federal Aid in Wildlife Restoration Act, Tennessee Valley Authority (TVA), Tribal Lands, or other unique areas or special lands that were acquired in fee or easement with public-use money and have deed restrictions or covenants on the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
27	Does the project involve Federal Emergency Management Agency (FEMA) buyout properties under the Hazard Mitigation Grant Program (HMGP)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28	Does the project include a <i>de minimis</i> or programmatic Section 4(f)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
29	Is the project considered a Type I under the NCDOT Noise Policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
30	Is there prime or important farmland soil impacted by this project as defined by the Farmland Protection Policy Act (FPPA)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31	Are there other issues that arose during the project development process that affected the project decision?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

G. Additional Documentation as Required from Section F:

Response to 1 – Dwarf wedgemussel, Northern Long Eared Bat, Neuse River waterdog

Dwarf wedgemussel is designated as a “range by basin” species and this project is within this species’ range. Additionally, suitable habitat for dwarf wedgemussel (DWM) does exist in Middle Creek within the study area. The Aquatic Survey conducted for this project identified the project location as the closest current NCNHP EO for the species; however, no Dwarf Wedgemussel individuals were observed. Although the Aquatic Survey did result in a Biological Conclusion of May Affect, Likely to Adversely Affect (MALAA), this species for this project may be covered by the Programmatic Biological Opinion (PBO) for Dwarf Wedgemussel, Tar River Spiny mussel, and Yellow Lance for Bridge and Culvert Replacements/Repairs/Rehabilitations in Eastern North Carolina, NCDOT Divisions 1-8.

The USFWS has developed a Programmatic Biological Opinion (PBO) in conjunction with the Federal Highway Administration (FHWA), USACE, and NCDOT for the Northern Long Eared Bat (NLEB) (*Myotis septentrionalis*) in eastern North Carolina. The PBO covers the entire NCDOT program in Divisions 1-8, including all NCDOT projects and activities. The programmatic determination for NLEB for the NCDOT program is May Affect, Likely to Adversely Affect. The PBO provides incidental take coverage for NLEB and will ensure compliance with Section 7 of the Endangered Species Act for five years for all NCDOT projects with a federal nexus in Divisions 1-8, which includes Johnston County, where this project is located. This level of incidental take is authorized from the effective date of a final listing determination through April 30, 2020.

Neuse River Waterdog is currently listed (proposed March 22, 2019) as a Proposed Threatened species with 4(d) rule considerations for protection under the Endangered Species Act. Neuse River Waterdog are known to occur in Johnston County and have previously been observed at the project site. During the Aquatic Survey for this project, seven observations of Neuse River Waterdogs were documented; however, these observations may include repeat captures of a given individual. The report’s Biological Conclusion for Neuse River Waterdog was MALAA. Upon listing, formal consultation for Neuse River Waterdog will be required; however, a PBO for the species is being developed and is currently (February 2020) in agency review. This PBO will also cover updated Critical Habitat for Neuse River Waterdog and it is anticipated that the portion of Middle Creek within the project area will be designated as Critical Habitat, once the listing of the species is finalized. Therefore, project related effects to Critical Habitat are also anticipated to be covered under the PBO.

Response to 8 – Yellow lance

Yellow lance is designated as a “range by basin” species and this project is within this species’ range. Additionally, suitable habitat for yellow lance does exist in Middle Creek within the study area. The Aquatic Survey conducted for this project identified the closest current NCNHP EO for this species as Swift Creek, located approximately 1.7 stream miles downstream of the project location. No Yellow Lance individuals were observed during the survey.

The Biological Conclusion of the Aquatic Survey for Yellow Lance was May Affect, Not Likely to Adversely Affect (MANLAA). Additionally, this species for this project may be covered by the PBO for Dwarf Wedgemussel, Tar River Spiny mussel, and Yellow Lance for Bridge and Culvert Replacements/Repairs/Rehabilitations in Eastern North Carolina, NCDOT Divisions 1-8.

Atlantic Pigtoe (*Fusconaia masoni*) are known to occur in Johnston County and they have been proposed for listing under the ESA. The Atlantic Pigtoe was proposed to be listed as Threatened under the ESA on October 11, 2018. The closest known occurrence for Atlantic Pigtoe (EO ID 11695) is approximately 1.5 stream miles away in Swift Creek. This current EO was first

observed in March 27, 1991 and last observed on March 25, 2019. As part of the Aquatic Survey conducted for this project, the project area was found not to be located within proposed Critical Habitat for Atlantic Pigtoe. The Biological Conclusion of the Aquatic Survey resulted in a determination of MANLAA.

Response to 9 – Anadromous Fish

Per a letter received from the North Carolina Wildlife Resources Commission (NCWRC) on May 14, 2018, Middle Creek within the project study area is designated as an Anadromous Fish Spawning Area (AFSA). Therefore, NCWRC recommended an anadromous fish construction moratorium from February 15 – June 30 of each calendar year.

Response to 10 – N.C. River Basin Buffer Rules

This project is located in the Neuse River Basin (USGS HUC 03020201). Middle Creek within the study area is a jurisdictional feature subject to the Neuse River Basin Riparian Buffer Rules administered by the North Carolina Department of Environmental Quality (NCDEQ). NC Division of Water Resources has recommended that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to Middle Creek. Post construction stormwater BMPs should, to the maximum extent practicable, be selected and designed to reduce nutrients. These recommendations are also consistent with and required by the PBO for Dwarf Wedgemussel, Tar River Spiny mussel, and Yellow Lance for Bridge and Culvert Replacements/Repairs/Rehabilitations in Eastern North Carolina, NCDOT Divisions 1-8 that applies to this project.

Response to Question 16 – Floodplain

This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.

The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

Response to Question 30 – FPPA

Farmland soils eligible for protection under FPPA are present within the project footprint (slope stakes plus 25 feet). Within the project footprint, 0.05 acres are classified as prime farmland, 0.53 acres are farmland of statewide importance, and 0.11 acres are prime farmland if drained.

A preliminary screening of farmland conversion impacts in the project area has been completed (NRCS Form AD-1006 for point projects, Part VI only) and a total score of 55 out of 160 points was calculated for the bridge project site (slope stakes plus 25-foot buffer). Since the total site assessment score does not exceed the 60-point threshold established by NRCS for further consideration, farmland conversion impacts may be anticipated, but are not considered notable.

H. Project Commitments:**NCDOT PROJECT COMMITMENTS**

TIP Project No. **BR-0026**
Replace Bridge 500050 on NC 210 over Middle Creek
Johnston County
Federal Aid Project No. N/A
WBS Element 67026.1.1

NCDOT Division 4 Construction, NCDOT SMU

- **FEMA Floodplains and Floodways** – This project involves construction activities on or adjacent to FEMA-regulated stream(s). Therefore, the Division shall submit sealed as-built construction plans to the Hydraulics Unit upon completion of project construction, certifying that the drainage structure(s) and roadway embankment that are located within the 100-year floodplain were built as shown in the construction plans, both horizontally and vertically.
- **Existing Programmatic Biological Opinion Commitments** – If NCDOT and the project's contractor cannot adhere to all commitments listed in *Section 2.5 Conservation Measures of the Revised Programmatic Biological/Conference Opinion for Bridge and Culvert Replacements/Repairs/Rehabilitations in Eastern North Carolina, NCDOT Divisions 1-8*, additional coordination with USFWS will be required.
- **Anticipated Programmatic Biological Opinion Commitments** – It is anticipated that the Neuse River Waterdog will be listed as a Threatened Species under the Endangered Species Act and that the portion of Middle Creek within the project area will be designated as Critical Habitat once construction of the project begins. It is also anticipated that a PBO will be in effect once this species listing occurs. This PBO will also include the proposed Critical Habitat. If NCDOT and the project's contractor cannot adhere to all commitments listed in this anticipated PBO and provide such Section 7 document in order to acquire a 404 permit from the United States Army Corps of Engineers, additional coordination with USFWS will be required.

NCDOT Division 4 Construction

- **Construction Moratoria** – The North Carolina Wildlife Resources Commission (NCWRC) identifies Middle Creek as Anadromous Fish Spawning Area (AFSA). NCDOT is committed to an in-stream construction moratorium from February 15 – June 30.

NCDOT Hydraulic Design Unit

- **Floodplain Mapping Coordination** – The Hydraulics Unit will coordinate with the NC Floodplain Mapping Program (FMP), to determine status of project with regard to applicability of NCDOT'S Memorandum of Agreement, or approval of a Conditional Letter of Map Revision (CLOMR) and subsequent final Letter of Map Revision (LOMR).

NCDOT Division 4, NCDOT SMU

- **School and EMS Notification** – The Johnston County Schools TIMS Supervisor (919-934-8340), Johnston County Emergency Services (919-989-5050), and Smithfield Fire Department (919-934-2468) will be contacted one month prior to construction and any road closures and detours.

Categorical Exclusion Approval:

TIP Project No.	<u>BR-0026</u>
WBS Element	<u>67026.1.1</u>
Federal Project No.	<u>N/A</u>

Prepared By:

2/17/2020

 Date

DocuSigned by:
Robinson Bessette

 Robby Bessette, Transportation Planner
 Three Oaks Engineering

Prepared For:

Structures Management Unit, North Carolina Department of
 Transportation

Reviewed By:

2/19/2020

 Date

DocuSigned by:
Philip S. Harris, III

 Philip S. Harris, III, PE, Environmental Analysis Unit Head
 North Carolina Department of Transportation

- Approved**
 - If NO grey boxes are checked in Section F (pages 2 and 3), NCDOT approves the Type I or Type II Categorical Exclusion.
- Certified**
 - If ANY grey boxes are checked in Section F (pages 2 and 3), NCDOT certifies the Type I or Type II Categorical Exclusion for FHWA approval.
 - If classified as Type III Categorical Exclusion.

2/19/2020

 Date

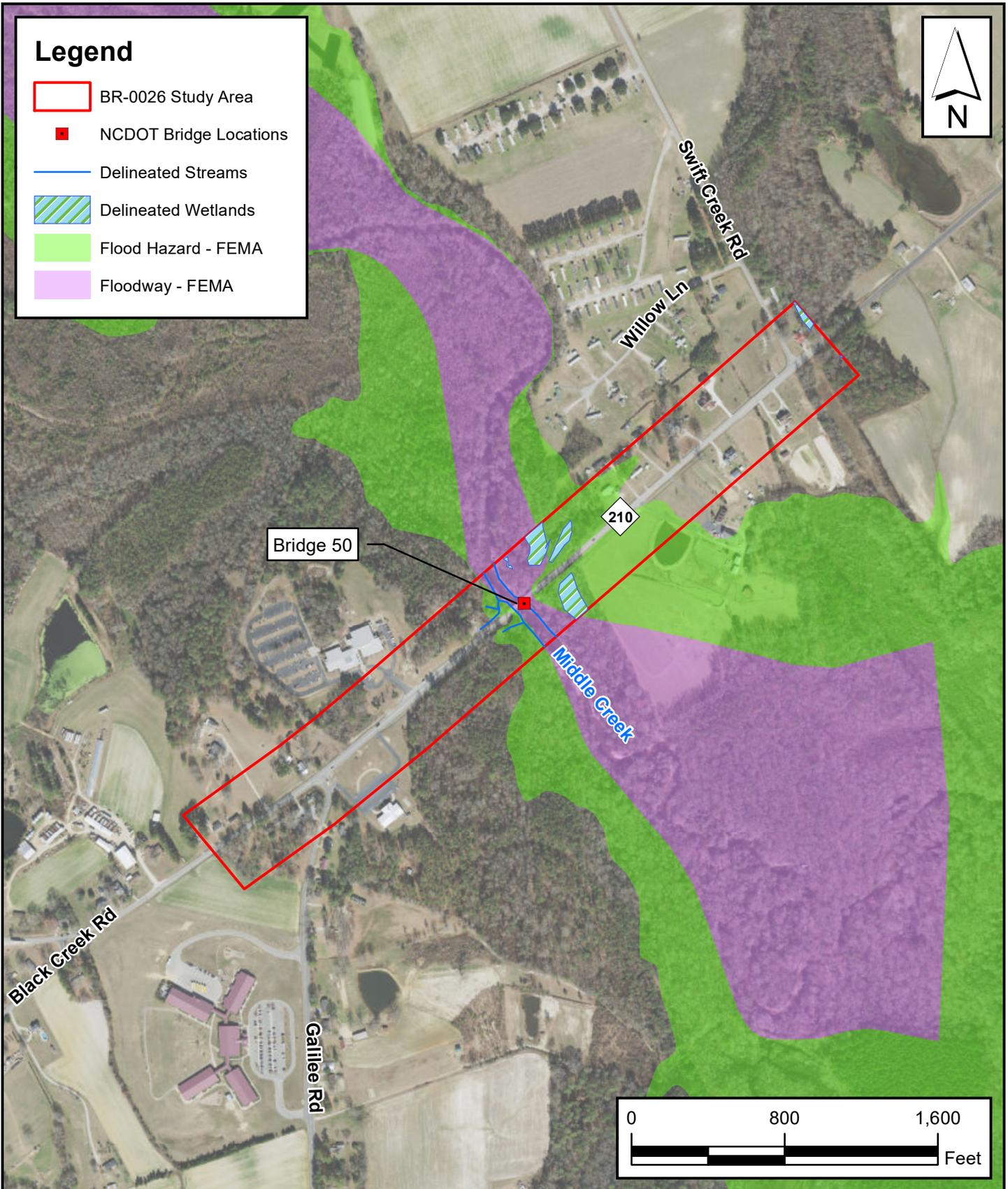
DocuSigned by:
Kevin Fischer

 Kevin Fischer, PE Assistant State Structures Engineer
 Structures Management Unit, North Carolina Department of Transportation

FHWA Approved: For Projects Certified by NCDOT (above), FHWA signature required.

_____ N/A _____
 Date for John F. Sullivan, III, PE, Division Administrator
 Federal Highway Administration

Note: Prior to ROW or Construction authorization, a consultation may be required (please see Section VII of the NCDOT-FHWA CE Programmatic Agreement for more details).



NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS

**ENVIRONMENTAL FEATURES MAP
REPLACE BRIDGE 50
ON NC 210 OVER
MIDDLE CREEK**

JOHNSTON COUNTY
NORTH CAROLINA

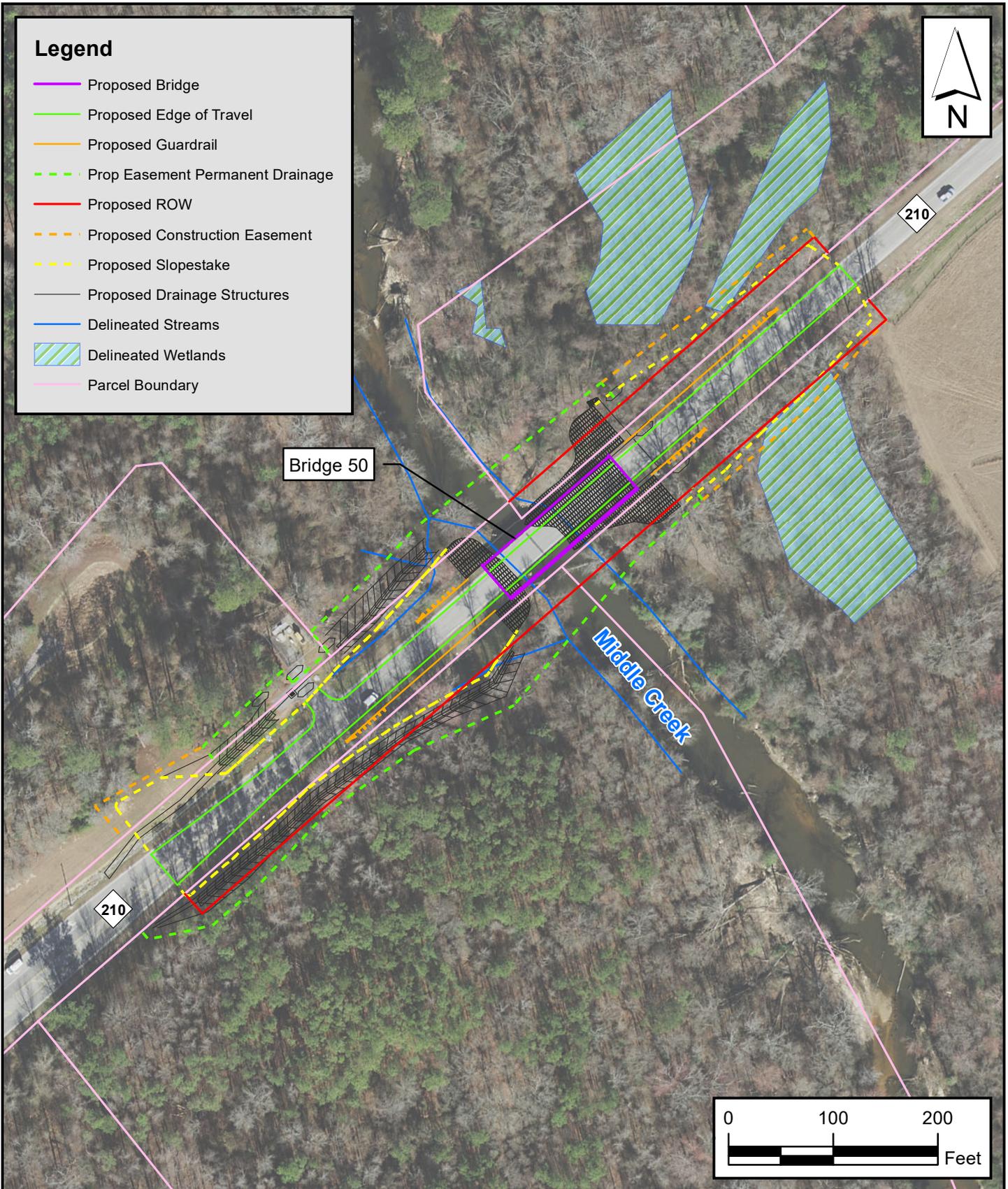
County: JOHNSTON

Div: 4 TIP# BR-0026

WBS: 67026.1.1

Date: NOVEMBER 2019

**Figure
2**



NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROJECT DESIGN MAP
REPLACE BRIDGE 50
ON NC 210 OVER
MIDDLE CREEK**

JOHNSTON COUNTY
NORTH CAROLINA

County: JOHNSTON

Div: 4 TIP# BR-0026

WBS: 67026.1.1

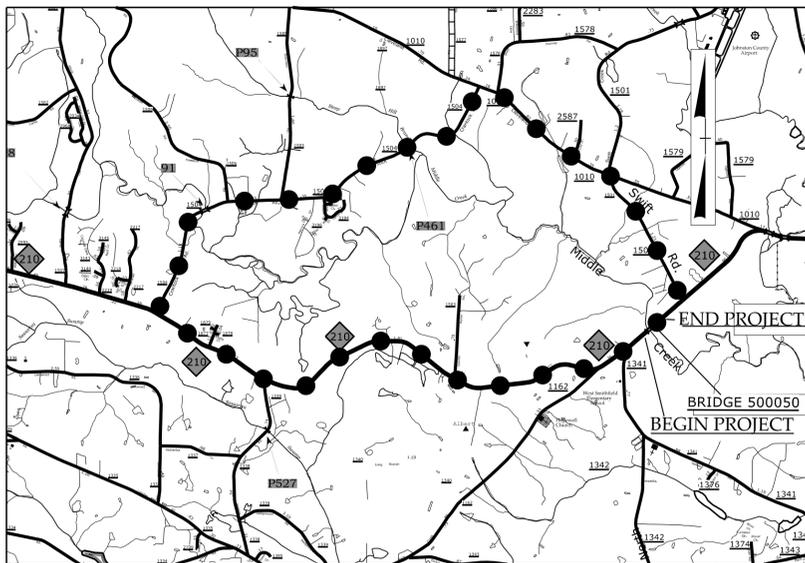
Date: NOVEMBER 2019

**Figure
3**

CONTRACT: TIP PROJECT: BR-0026

CONTRACT:

See Sheet 1A For Index of Sheets



VICINITY MAP
OFF-SITE DETOUR ●●●●●

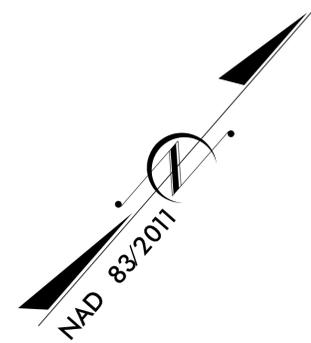
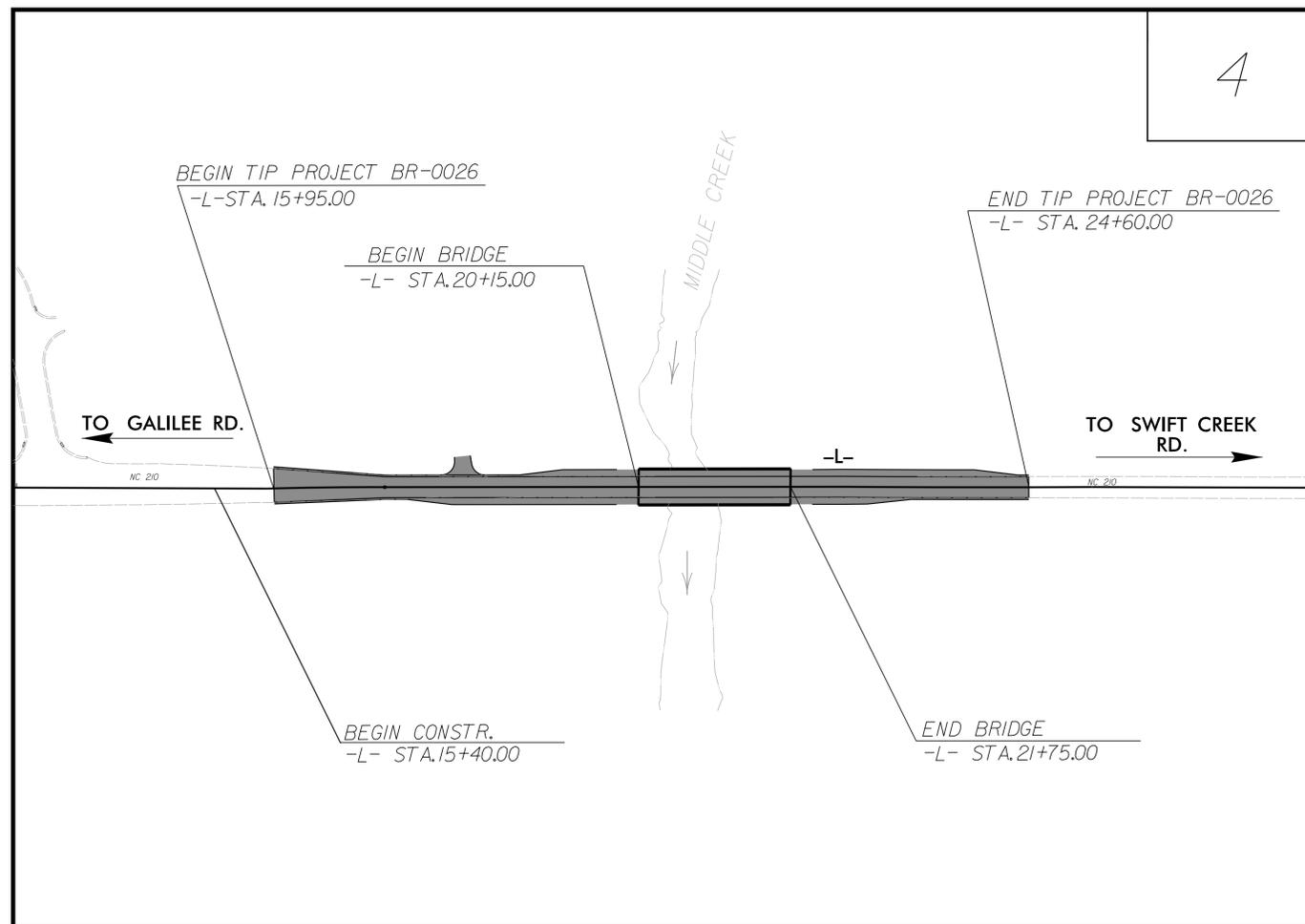
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JOHNSTON COUNTY

LOCATION: REPLACE BRIDGE (500050) ON NC-210 OVER MIDDLE CREEK
TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BR-0026	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
67026.1.1		P.E.	
67026.2.1		RW & UTILITIES	

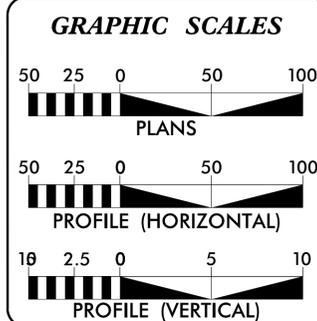
CFI PLAN SUBMITTAL
SEPTEMBER 23, 2019



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II MODIFIED.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2020 =	8,900
ADT 2045 =	14,000
K =	10%
D =	65%
T =	4%
V =	45 MPH
* TTST =	1% DUAL = 3%
FUNC CLASS =	MINOR ARTERIAL
REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY PROJECT =	0.134 MI
LENGTH STRUCTURE PROJECT =	0.030 MI
TOTAL LENGTH OF PROJECT =	0.164 MI

NCDOT CONTACT: DAVID STUTTS, P.E.
PROJECT ENGINEER, PEF/PRG MGT.

Prepared in the Office of:
VAUGHN & MELTON, INC.
3509 Haworth Dr. #100, Raleigh NC, 27609 Phone (919)-977-9455

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: OCTOBER 29, 2019	JOHN LANSFORD, P.E. PROJECT ENGINEER
LETTING DATE: AUGUST 18, 2020	KEITH BRIDGERS PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

V&M
Vaughn & Melton
Consulting Engineers

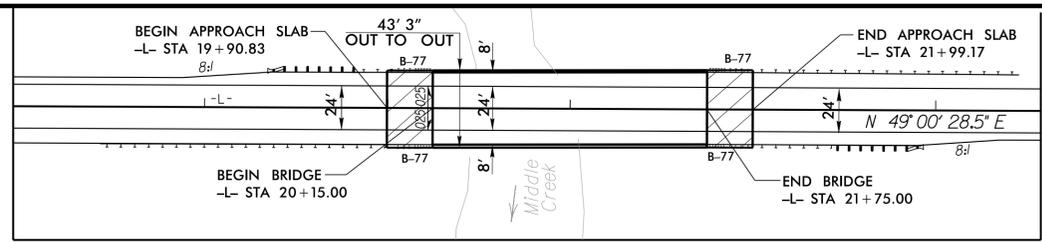
Asheville, North Carolina 828-253-2796

Boone, NC 828-355-9933
Tri-Cities, TN 423-467-9400
Knoxville, TN 865-546-5800
Spartanburg, SC 864-574-4775
Charleston, SC 843-974-5650
Madisonville, KY 606-348-5600
Atlanta, GA 770-627-3509

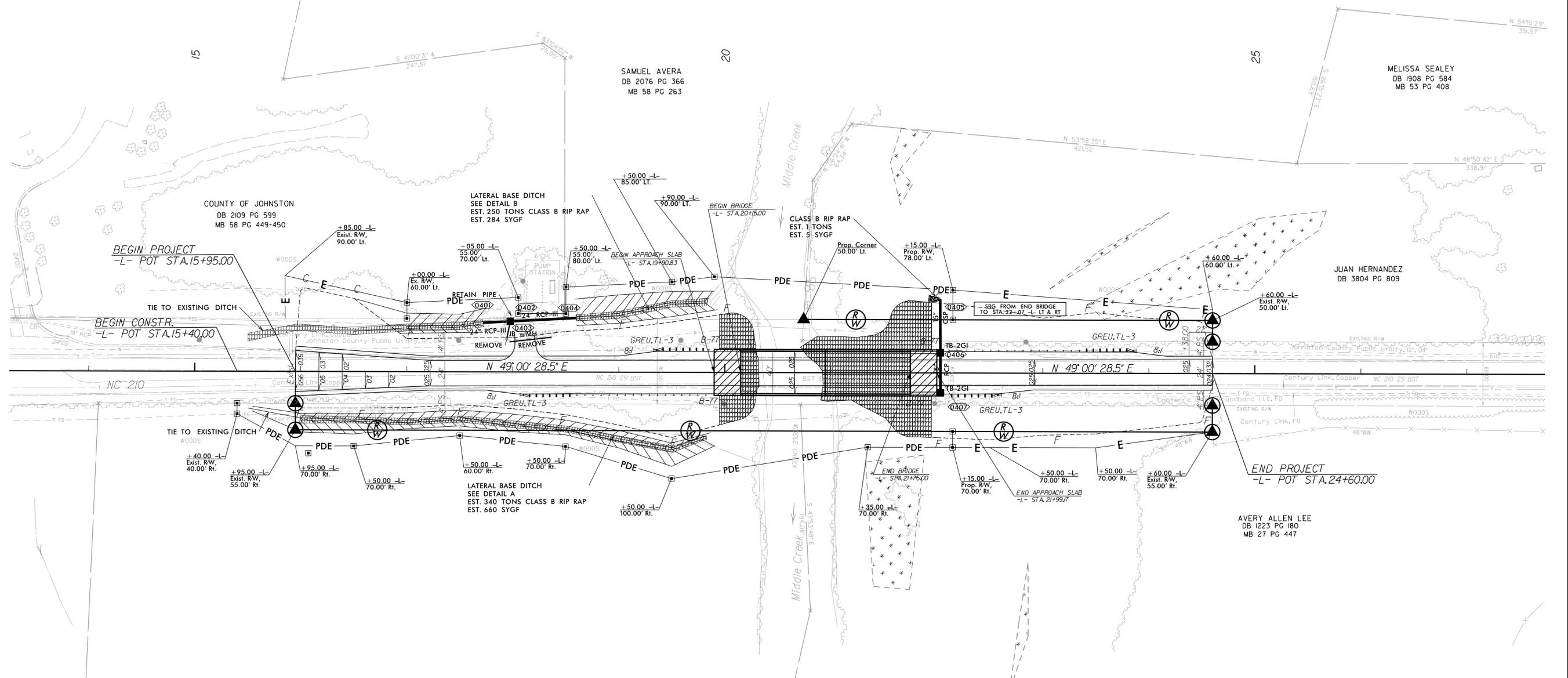
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5/14/09

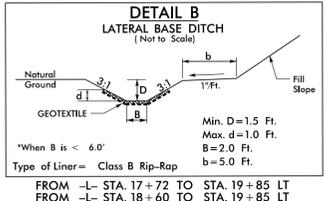
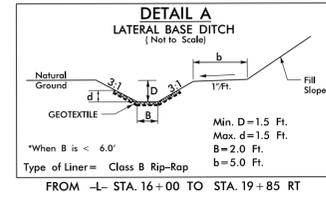
PROJECT REFERENCE NO. <i>BR-0026</i>		SHEET NO. 4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
INCOMPLETE PLANS DO NOT USE FOR R/W ACQUISITION			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



Relationship Between Approaches and Structure



JOYCE IVEY COOPER
DB 1819 PG 772
MB 27 PG 447



SEE SHEET 5 FOR PROFILE

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17-12-0061



HISTORIC ARCHITECTURE AND LANDSCAPES NO HISTORIC PROPERTIES PRESENT OR AFFECTED FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	BR-0026	County:	Johnston
WBS No.:	67026.1.1	Document Type:	
Fed. Aid No:		Funding:	X State Federal
Federal Permit(s):	X Yes No	Permit Type(s):	USACE
Project Description: Replace Bridge No. 50 on NC 210 over Middle Creek (no off-site detour specified in review request).			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

- There are no National Register-listed or Study Listed properties within the project's area of potential effects.
- There are no properties less than fifty years old which are considered to meet Criteria Consideration G within the project's area of potential effects.
- There are no properties within the project's area of potential effects.
- There are properties over fifty years old within the area of potential effects, but they do not meet the criteria for listing on the National Register.
- There are no historic properties present or affected by this project. (Attach any notes or documents as needed.)

REVIEW ACTIVITIES, RESULTS, AND CONCLUSIONS: HPOWeb reviewed on 18 January 2018 and 26 September 2018 and yielded one SL, and no NR, DE, LD, or SS properties in the Area of Potential Effects (APE). The APE for historic architectural resources equates with the study area provided in the original review request and revised in July 2018 (see attached). Johnston County current GIS mapping, aerial photography, and tax information indicated a partly wooded and partly developed APE with mostly residential resources dating from the 1900s to the 2010s (viewed 18 January 2018 and 26 September 2018). The APE intersects four properties of possible significance, including the study-listed Wallace-Rand Farm (JT0715). The remaining three properties are: the Alford-Rand-Putnam Farm (JT1990), Sanders-Smith Cemetery (JT1991), and Whitley House (JT1989). Bridge No. 50, constructed in 1934, is not eligible for the National Register according to the NCDOT Historic Bridge Inventory as it is neither aesthetically nor technologically significant. Comprehensive architectural survey of the county (1980; 2003-4), as well as later studies, recorded no additional resources besides the study-listed property noted above. County GIS/tax materials and other visuals, like Google Maps "Street View," clearly illustrated the relative placement of the study-listed and other resources and the proposed work, which indicated the need for a field investigation and NR eligibility evaluation.

Commonwealth Heritage Group, Inc. carried out the investigation and evaluation of the four properties question under the supervision of NCDOT-Historic Architecture and presented findings in an August 2018 technical report. The Wallace-Rand Farm (JT0715) is no longer extant, and the Alford-Rand Putnam Farm (JT1990), Sanders-Smith Cemetery (JT1991) and Whitley House (JT1989) have lost historical

integrity, principally in setting and association, and do not meet any criteria for inclusion in the National Register of Historic Places. The North Carolina Historic Preservation Office (HPO) has reviewed the report and agreed with the eligibility recommendations. There are no National Register-listed or -eligible resources in the APE. Thus, a finding of "no historic properties affected" will satisfy both GS 121-12(a) and Section 106 compliance requirements.

Should the design of the project change, please notify NCDOT Historic Architecture as additional review may be necessary.

SUPPORT DOCUMENTATION

X Map(s) Previous Survey Info. Photos X Correspondence Design Plans

Technical report, photographs, GIS data
on file at NCDOT Historic Architecture and HPO.

FINDING BY NCDOT ARCHITECTURAL HISTORIAN

Historic Architecture and Landscapes – **NO HISTORIC PROPERTIES PRESENT OR AFFECTED**

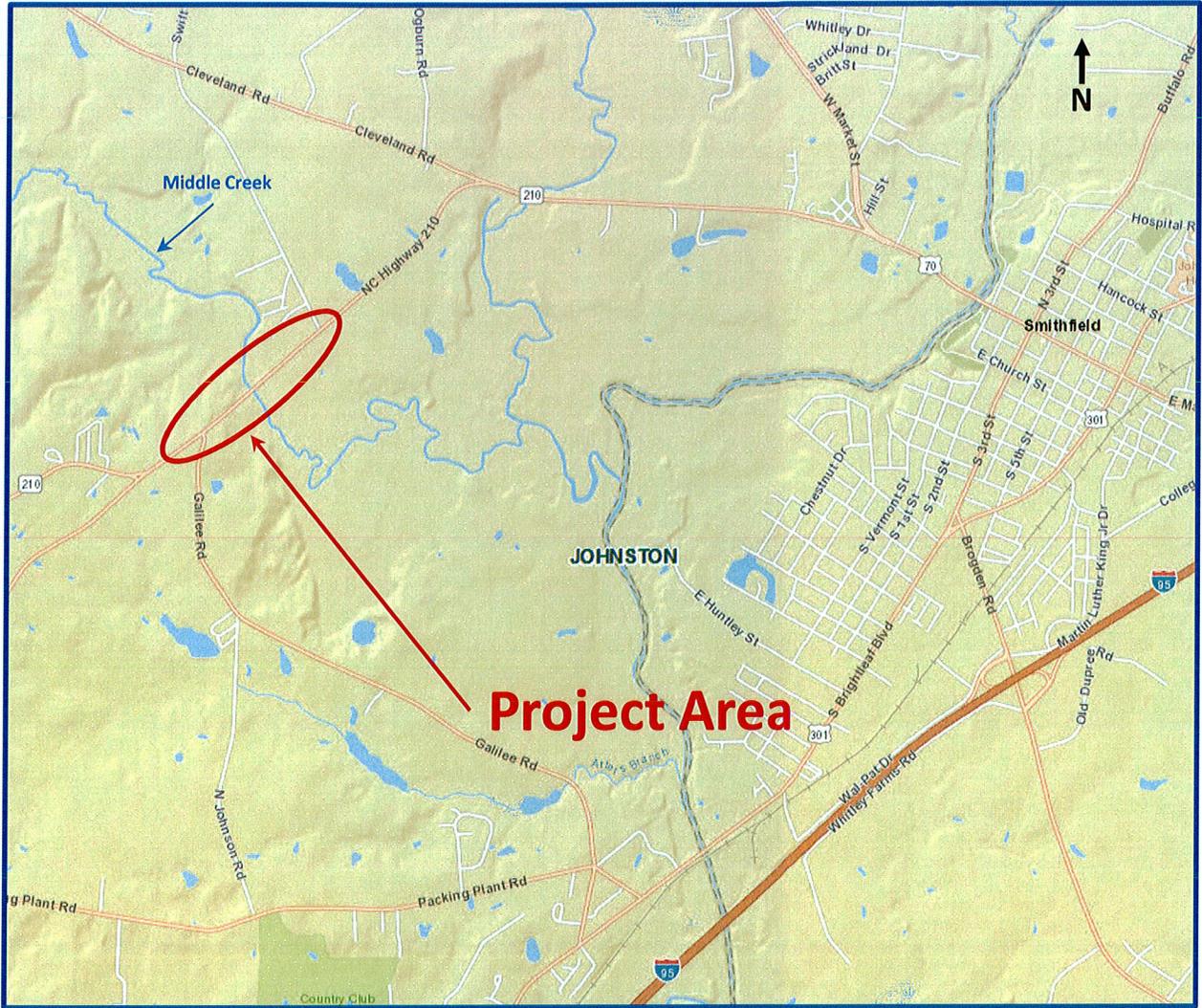
Vanessa C. Patrick

26 September 2018

NCDOT Architectural Historian

Date

BR-0026, Johnston County
WBS No. 67026.1.1
Tracking No. 17-12-0061



BR-0026

Bridge No. 50 Replacement

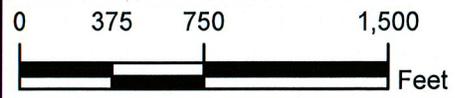
Johnston County

WBS No. 67026.1.1

Base map: HPOWeb, nts

Legend

 BR-0026 Study Area



NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION
DIVISION OF HIGHWAYS

STUDY AREA MAP REPLACE BRIDGE 50 ON NC 210 OVER MIDDLE CREEK

JOHNSTON COUNTY
NORTH CAROLINA

County: JOHNSTON

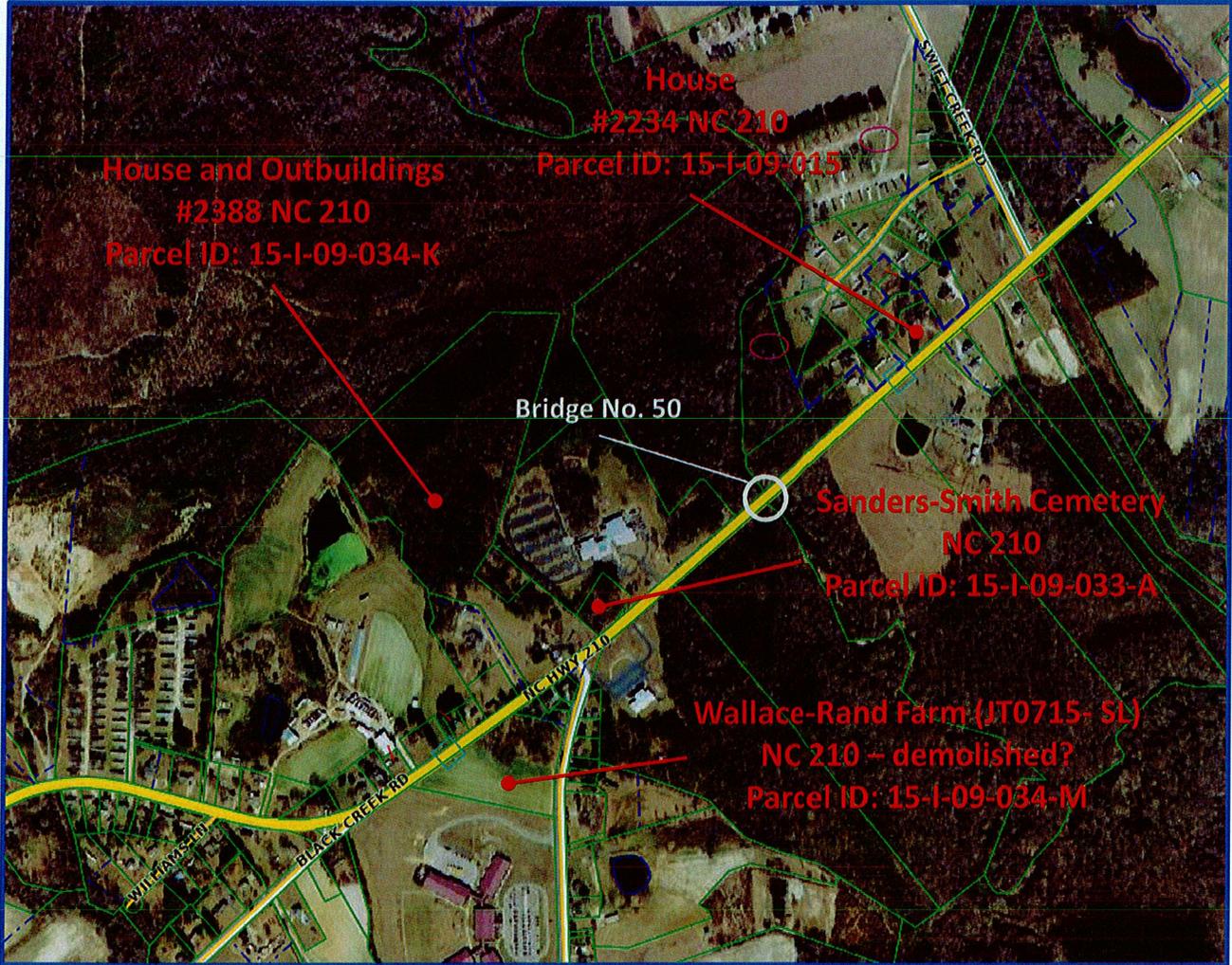
Div: 4 | STIP#BR-0026

WBS: 67026.1.1

Date: JULY 2018

Figure

2



Properties to be Evaluated

BR-0026 Bridge No. 50 Replacement Johnston County
WBS No. 67026.1.1 Base map: Current Johnston County GIS



**North Carolina Department of Natural and Cultural Resources
State Historic Preservation Office**

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary Susi H. Hamilton

Office of Archives and History
Deputy Secretary Kevin Cherry

September 21, 2018

MEMORANDUM

TO: Vanessa Patrick
Human Environment Unit
NC Department of Transportation

FROM: Renee Gledhill-Earley *Renee Gledhill-Earley*
Environmental Review Coordinator

SUBJECT: Historic Structures Survey Report, Replace Bridge, on NC 210 over Middle Creek,
PA 17-12-0061, BR-0026, Johnston County, ER 18-2119

No. 50

Thank you for your August 13, 2018, memorandum transmitting the report for the above-referenced undertaking. We have reviewed the report and concur that the following properties are not eligible for listing in the National Register of Historic Places under any Criteria.

- Alford-Rand-Putnam Farm (JT1990)
- Sanders-Smith Cemetery (JT1991)
- Wallace-Rand Farm (JT0715)

Please note our reservations concerning the following property.

- Whitley House (JT1989) Because this ca. 1920 house is remarkably intact on the exterior, it has the potential to meet Criterion C as embodying the distinctive characteristics of a Craftsman bungalow farmhouse. Only one other Craftsman bungalow farmhouse, out of quite a few that have been recorded in the county, is cited in the report as a comparable example, and while it retains its rural setting (much of the surrounding Whitley House land has been subdivided for new houses), it does not preclude the possibility that a second fine example of a Craftsman bungalow could be eligible. Because the consultant could not document the interior of the Whitley House, however, we do not have sufficient information to find it eligible.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-807-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

cc: Mary Pope Furr, NCDOT, mfurr@ncdot.gov



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

Memorandum

To: Renee Gledhill-Earley
Environmental Review Coordinator
North Carolina State Historic Preservation Office

From: Vanessa E. Patrick
Architectural Historian
NCDOT - Historic Architecture

Date: September 26, 2018

Subject: *Historic Structures Survey Report. Replace Bridge No. 50 on NC 210 over Middle Creek, Johnston County. TIP No. BR-0026. PA No. 17-12-0061. ER 18-2119.*

Thank you for your recent comments on the above report. We are pleased that you concur with our recommendations that the Alford-Rand-Putnam Farm (JT1990), Sanders-Smith Cemetery (JT1991), and Wallace-Rand Farm (JT0715) are not eligible for listing in the National Register of Historic Places.

We understand your reservations about the eligibility of the Whitley House (JT1989). As noted in the report (p. 16), some thirty-five examples of the Craftsman bungalow farmhouse are recorded in the county, but most are smaller than the Whitley House and also less comprehensive expressions of the form. The investigator selected the most similar example for comparison. We appreciate your assessment that given the unlikely granting of interior access, the property cannot be considered eligible at present.

As always, your help is greatly appreciated. Should questions arise, please contact me at vepatrick@ncdot.gov or 919-707-6082.

V.E.P.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
HUMAN ENVIRONMENT SECTION
MSC 1598
RALEIGH, NC 27699-1598

Telephone: (919)-707-6000
Fax: (919)-212-5785
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DRIVE
RALEIGH, NC 27610

www.ncdot.gov

17-12-0061



NO ARCHAEOLOGICAL SURVEY REQUIRED FORM

This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.



PROJECT INFORMATION

Project No: **Br. No 0050** *County:* **Johnston**
WBS No: **67026.3.1** *Document:* **M C C**
F.A. No: **N-A** *Funding:* State Federal
Federal Permit Required? Yes No *Permit Type:* **tbd**

Project Description: NCDOT proposes to replace Bridge No. 0050 on NC 210 over Middle Creek in southeastern Johnston County. This is a state funded project though it will require federal permitting, therefore, Section 106 of the National Historic Preservation Act applies.

No design mapping or conceptual alternatives were available at the time of the review, however study area mapping was provided for the project. The project length is listed as 0.5 miles (2640 feet) though the study area shows a length closer to 0.8 miles (4200 feet). From the study area, the width on mapping is 500 feet, about 250 feet to either side of the NC 210 centerline. Offsite detours, while possible, may be lengthy, therefore several design and construction alternatives will be considered including replacement in place on approximately the same location with a temporary onsite detour adjacent to current bridge, or a shift up or downstream while using the existing bridge to maintain traffic during construction. As environmental and design factors, including this one, are still be considered, the generous study area shown on early planning mapping, described above, will serve as the Archaeological Area of Potential Effects (see Figure 1). This review covers the entire APE, though focuses on the likely location of the bridge replacement and approaches.

SUMMARY OF ARCHAEOLOGICAL RESOURCES REVIEW:

NO SURVEY REQUIRED

Brief description of review activities, results of review, and conclusions:

USGS mapping and aerial photography was examined (see Figures 1 and 2). Virtual drive-by using Bing and/or Google Maps was examined. The APE contains mixed terrain agricultural fields, residential lawns, wooded areas especially in lower, wet areas, the generally two-lane NC 210 roadway itself and the Johnston County Agricultural Center. It is notable that there have been several modern improvements along NC 210, including a major sewage line project and a pump station which is only about 150-200 feet from the bridge south of Middle Creek on NC 210 on the north side of the road (west of Bridge No. 50). Avoidance of this sewage improvement project may be part of the decision making during design development. Roadside disturbances from this type of project involve a lot of earthmoving which often destroys archaeological integrity at that location.

Several notable observations are made concerning the southwestern end of the project. Built a little over a decade ago, according to review of aerial photography over time, the Johnston County Agricultural Center is present north of the intersection with Galilee Road (SR 1341). Previously, the property was used for farm-related activities and it appears the entrance area has undergone major alteration and landscaping. Some of the parking lot fall within the APE. Here, to, is a sizable cemetery which falls almost entirely within the APE which will be discussed in greater detail below. The intersection with SR 1341 (Galilee Road) and NC

210 has been realigned in the recent past resulting in more disturbance of soils and any existing, intact archaeological context. Further, there is a major cut into the elevated landform containing the cemetery which possibly correlates to an earlier road, perhaps an extension of Galilee Road or earlier alignment of NC 210. Parcel mapping also suggests a different route in this area. And, finally, there has been recent road widening of NC 210 near this intersection in front the Agricultural Center, suggesting to this reviewer that realignment or widening at or further away from the bridge replacement may be unlikely. If so, the immediate disturbances have greatly reduced the probability for intact, significant archaeological sites to be encountered.

Soil type mapping was studied. The more elevated land forms on opposite ends of the study area generally contain Norfolk Sandy loam and make up about 40% of the APE. These are attractive, drained soils used as agricultural fields and for residences. Further away from the bridge, impacts may be limited here, though alternatives are yet developed. Closer to the bridge are the low and often flooded or waterlogged Wehadkee loam, and the sloped soils at the south margin of Middle Creek and area less likely to contain typical Native American or early historic archaeological sites.

Historic maps and aerials provide useful information regarding expectations for archaeological sites at project area. A few of these are discussed here. The 1911 Johnston County Soil Survey (MC.056.1911h) shows a road that follows a similar or same alignment as the the existing NC 210, though shows the earlier alignment of Galilee Road. Interestingly, the crossing at Middle Creek occurs out of line with the road, south or downstream. It is unclear if the current Bridge No. 50 is at the same location of just nearby the earlier bridge. Similarly, the 1910-1919 Rural Delivery Routes Map shows this same shift (Cm912.51.1918u). Some evidence of these is also seen in parcel mapping boundaries which follow a possible older road. The current bridge, built in 1934, likely resulted in the current configuration on NC 210 and the approach to the creek. Some structures were present near the western end of the APE in those earlier maps, though few remain following the later twentieth century development.

No mapping, including older and modern USGS mapping or midcentury county road mapping depicts the Sanders/Smith cemetery. Cemeteries are abundant in the area, and several are not mapped on USGS mapping. It should be noted that the cemetery has been referenced as "Black," possibly African American, in online cemetery records.

Several historic aerials were reviewed, including 1960's and 1970's contact sheets at NCDOT and also earlier maps, 1937/1939 and 1949 that were accessed from Johnston County's website. Little has changed other than what has been mentioned above. As expected an older roadbed might be visible in those earlier aerials. More land is cleared and plowed, including some of the more sloped terrain suggesting an attempt at farming at the expense of greater erosion. Infrastructure construction is visible in more modern aerial mapping impacting the APE closest to NC 210. The parcel containing the Sanders/Smith cemetery is visible in all of the aerials, including a possible road trace in earlier examples.

A visit to the Office of State Archaeology for background research showed several past archaeological reviews in the area, including for airport improvements (ER 89-8366, Bib # 2590), the nearby Johnston County landfill (ER 94-8402, Bib# 3599) and others. There are no recorded sites within the project APE, however, one is just outside and there are others in relatively close proximity. Site 31Jt94, an unassessed Native American site, is south of NC 210 on high ground 300-400 feet from the road near a residence and newer farm pond. Likely at the location of the Agricultural Center and also outside of the APE is an unnumbered 31Jt--, near some previous farm structures overlooking the creek though no further information was available. Other nearby sites include 31Jt29, 31Jt33, 31Jt34, 31Jt35 and 31Jt71, though they are further away. The two larger reviews that resulted in survey mentioned above recorded several sites, also. Most of the sites were listed as "not eligible" for listing on the National Register of Historic Places or were not formally evaluated. There is no review or recorded archaeological sites present within or overlapping the project APE.

17-12-0061

The reviewing Architectural Historian from NCDOT noted a house property at 2234 NC 210 includes a stone wall by the roadway. This low stone wall was mapped and will be provided to that reviewing group. A survey required form was recommended for historic architecture in January 2018.

It is believed that only one cemetery falls within the APE, the previously mentioned Sanders/Smith cemetery (1880s - 1970s) which has a larger number of burials dating to the 1910s. The parcel containing it is listed as having a cemetery and includes a parallel cut in the landform that likely equates to an early road noted earlier. Almost the entire parcel is contained within the APE. GIS based LiDAR elevation mapping clearly shows the cut landform (see Figure 4). The location was visited during a field reconnaissance. Burials, both unmarked and marked with different materials (formal granite, cement, metal/paper plaques, fieldstone), number an estimated 75 to 100. These are aligned facing southeast and are present in rows and clusters that trend parallel to the parcel which presumably was set aside for this purpose. It is not mapped on USGS mapping or older county road maps, though Johnston County parcel data and the database of cemeteries maintained by NCDOT archaeologist, Paul Mohler, do depict the presence of the cemetery here.

Using GPS equipment, a basic delineation was mapped to include the apparent limits of the burials, some woven iron fence and a modern retaining wall. A small number of headstones were mapped to demonstrate the southernmost burials, those closest to NC 210. As noted before, a major cut (perhaps 10+ feet) in the topography follows a likely old road bed and is not be considered part of the used portion of the parcel. No burials were located very close to the NC 210 roadway, and none are likely to be affected by the bridge replacement (Br. No. 50 is some 1000 feet away and NC 210 is about 100 feet away from the closest obvious burial), though alternatives have not been developed.

Based on the scale and nature of this bridge replacement project, some new, but limited impacts may be expected to the surrounding ground surfaces especially if an onsite detour is planned or the bridge is placed on a new alignment. Much of the impacts within the APE would likely fall close to the existing NC 210 facility and Middle Creek where it would cross a poorly drained landform and ascending terrain. Because of the scale of expected impacts, the known modifications and disturbances, and environmental factors, no archaeological survey is recommended for the undertaking, assuming that design shows no impacts to the cemetery burials are likely. Should any unanticipated discovery of archaeological remains be encountered during construction, please contact our office for guidance.

Should designs ultimately impact the north side of widened NC 210 close to the county Agricultural Center, impacting the major sewage line and more than 50-75 feet off the existing ROW, the cemetery should be further investigated, mapped and thoroughly documented. If impacts are then still shown to be likely and the cemetery cannot be avoided, then treatment and removal of the remains according to NC G.S. 65 or 70 is appropriate.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
 Photocopy of County Survey Notes Other:

FINDING BY NCDOT ARCHAEOLOGIST – NO SURVEY REQUIRED


 NCDOT ARCHAEOLOGIST

3/14/2018

Date

17-12-0061

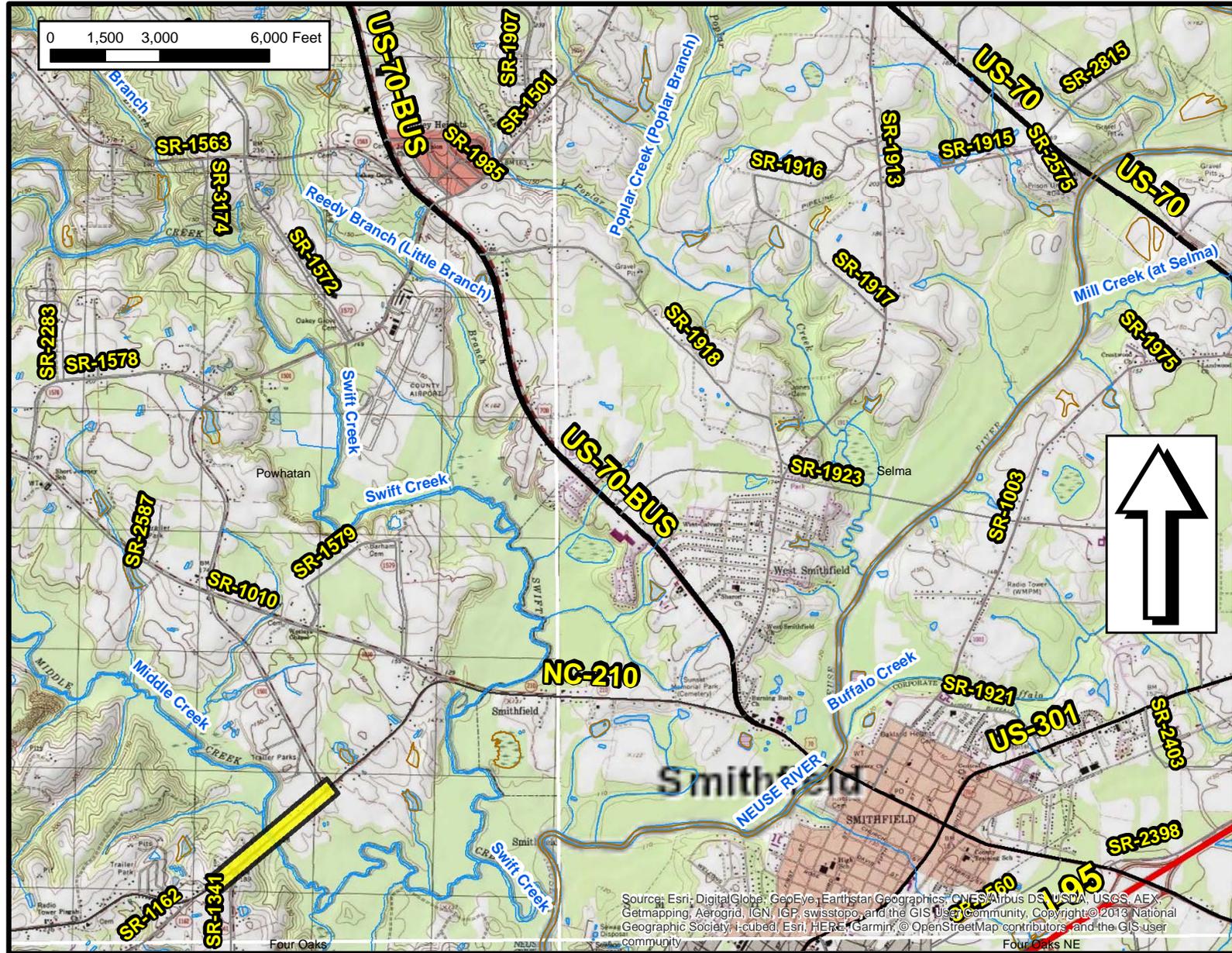


Figure 1. USGS mapping (Powhatan, left, and Selma, right) showing the general project location in Johnston County. The APE is highlighted in yellow, showing NC 210 over Middle Creek.

"NO ARCHAEOLOGICAL SURVEY REQUIRED" form for the Amended Minor Transportation Projects as Qualified in the 2015 Programmatic Agreement.

17-12-0061

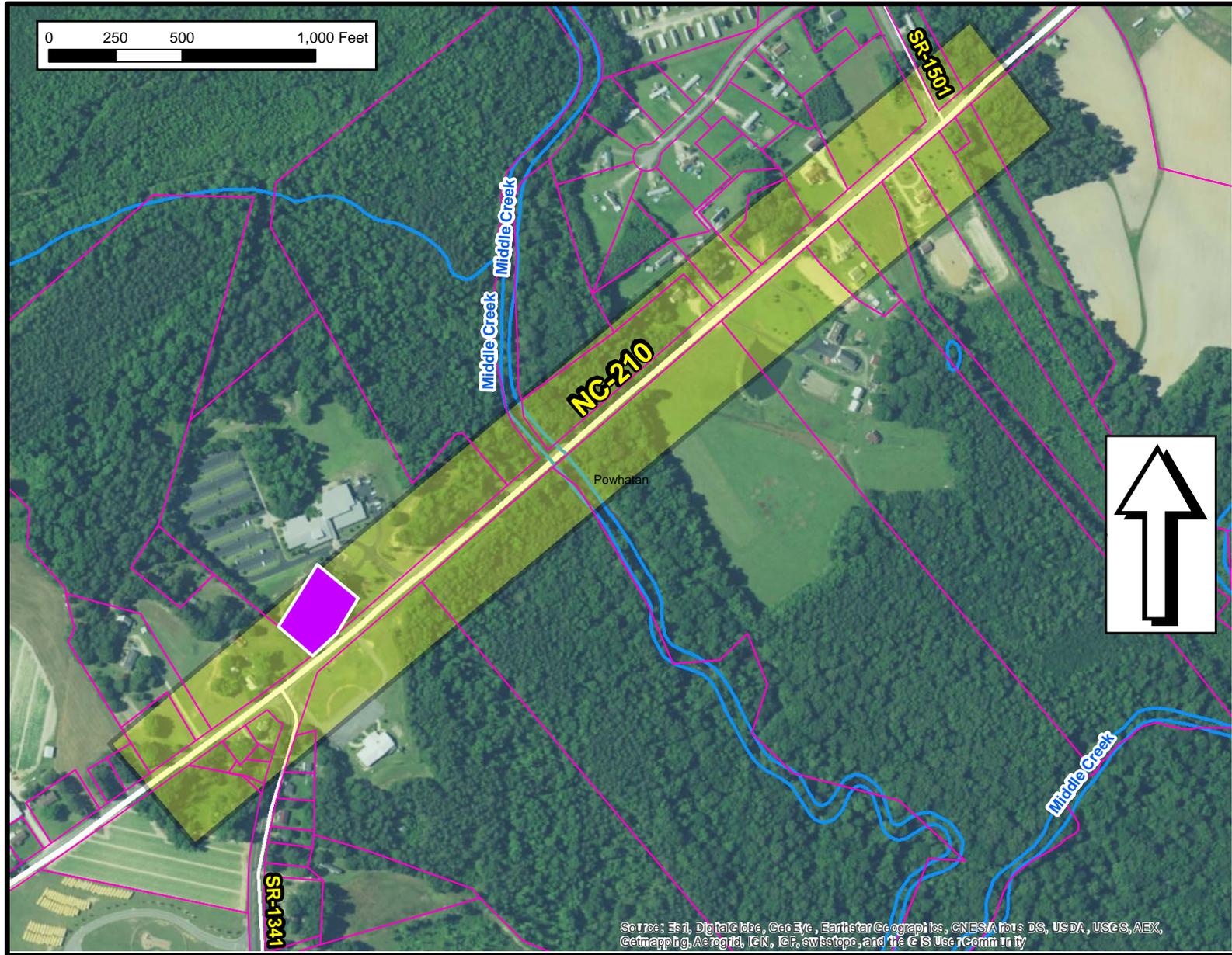


Figure 2. Aerial photograph of NC 210, Bridge No. 50, over Middle Creek. The Area of Potential Effects for the bridge replacement is approximated in yellow. The parcel containing the Sanders/Smith Cemetery is shaded purple.

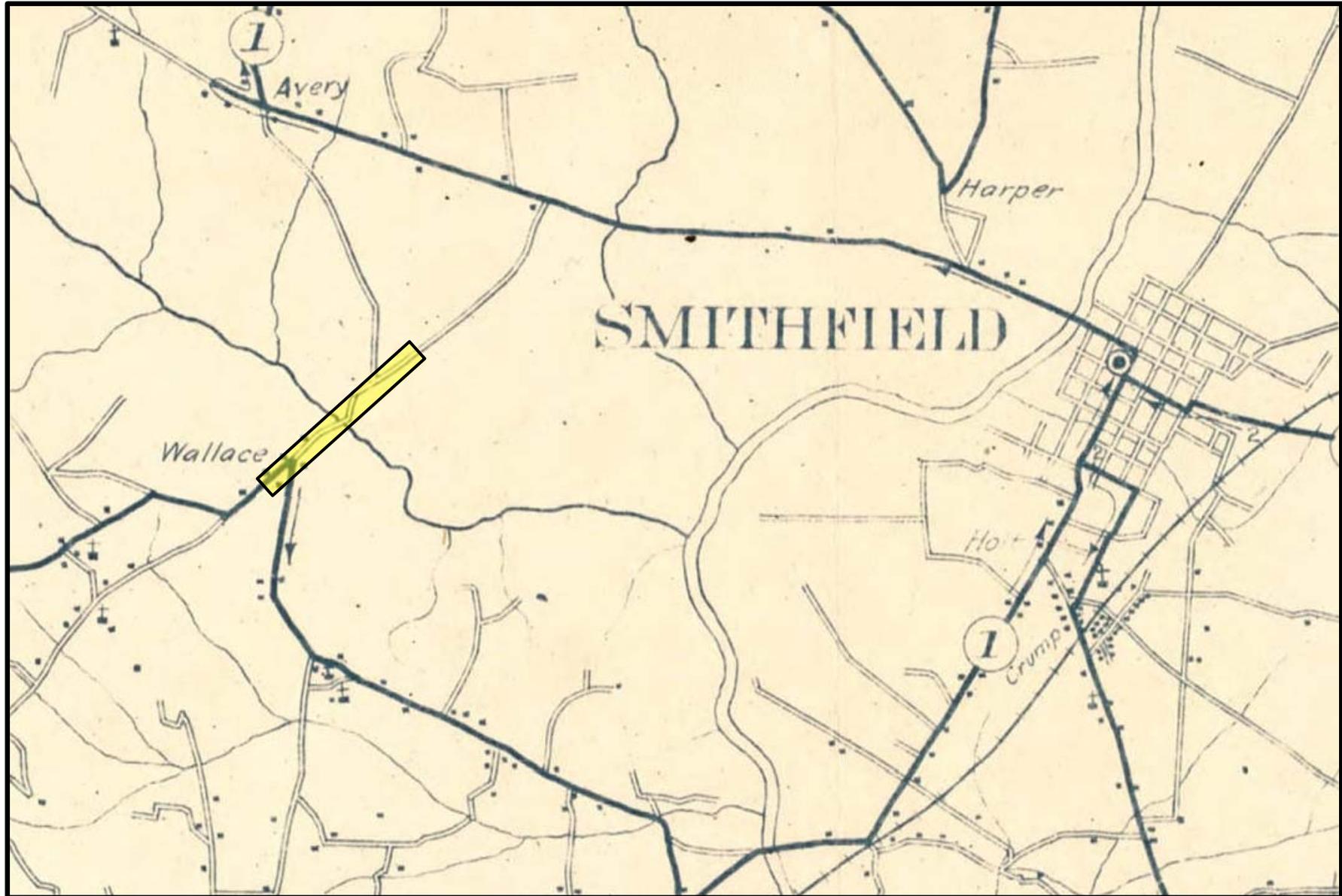


Figure 3. Excerpt of 1910-1919 Rural Delivery Routes (CM 912.51_1918u), Johnston County, showing the Smithfield vicinity and current project location at Middle Creek. Note the alignment of the intersection of an earlier version of NC 210 at SR 1341 (Galilee Road) and especially the misaligned and skewed crossing at Middle Creek. The approximate APE is shown in yellow.

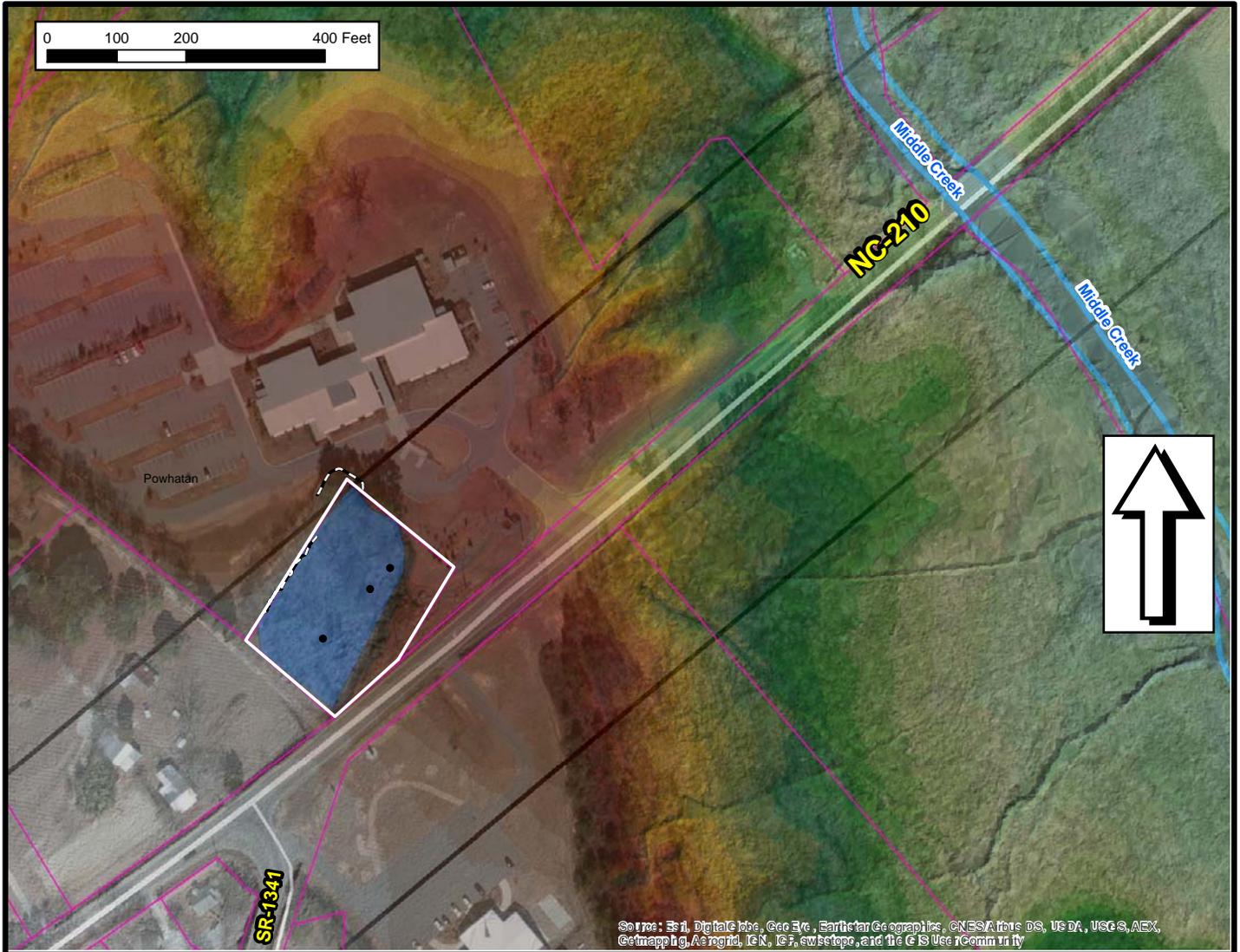


Figure 4. Detail of LiDAR elevation mapping at the western half of the project with a focus on the Sanders/Smith cemetery, the Agricultural Center, and improvements along NC 210 and the intersection with SR 1341 (Galilee Road). The APE (study area) is shown as a bold black line, parcel lines in purple with the cemetery parcel highlighted white. A blue shaded area represents the unmodified portion of that larger parcel, an existing steep cut, easily seen in the elevation data and shading, is probably outside of the used cemetery. A wire fence was mapped along the northern property line, a likely boundary for the cemetery in that direction. A modern block retaining wall next to the parking lot is also mapped. The dots are representative headstones that are closest to the roadway.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

MEMO TO: Jackie Obediente
Three Oaks Engineering

FROM: John Vine-Hodge
Division of Bicycle and Pedestrian Transportation

DATE: September 7, 2018

SUBJECT: Scoping Review for **BR-0026**, Johnston County

The Division of Bicycle and Pedestrian Transportation has reviewed project BR-0026, replacement of bridge no. 500050 on NC 210 over Middle Creek in Johnston County.

Existing Facilities

There are no known dedicated pedestrian or bicycle facilities at the bridge location, though the travel lanes may be used by bicyclists.

Surrounding Land Use

Sparsely populated, there are mobile home developments in the vicinity of both ends of the bridge.

Existing Plans

There are no known plans calling for bicycle/pedestrians accommodations at the bridge location.

Known Bike/Pedestrian Crashes (2007-2015)

There was one bicycle crash (2012) at Swift Creek Road just northeast of the bridge location.

Recommendations

The lack of development and absence of supporting plan documentation would seem to indicate not a significant demand for bicycle or pedestrian accommodations. However, the presence of mobile home developments in the area may generate some bike/pedestrian traffic. It is, therefore, recommended for minimum 4 ft. shoulders to be carried over the bridge (bridge and approaches) for the safety of any potential bicyclist or pedestrian.

We appreciate the opportunity to comment on this project. Please let us know if there is a need for additional information.